

US005687671A

United States Patent [19]

Gates

3,965,611

[11] Patent Number:

5,687,671

[45] **Date of Patent:**

Nov. 18, 1997

[54]	UNDERWATER PROPULSION DEVICE			
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[21]	Appl. No.: 636,999			
[22]	Filed:	Арг. 17, 1996		
[52]	Int. Cl. ⁶			
[56] References Cited				
U.S. PATENT DOCUMENTS				
2	,983,244	/1943 Pels 440/38 /1961 Young 440/44 /1962 Davis 440/38		

6/1976 Pippin 46/74 B

4,057,961	11/1977	Payne 440/38
		Hagelberg et al 114/337

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[57] ABSTRACT

Disclosed is a water jet propulsion device for divers and diver equipment. A forward pressurized air chamber and a rearward water containing chamber are positioned inside a cylindrical housing and are separated by a flexible membrane which is adjacent to a conical deformation plate. On opening a valve located in communication with the water containing housing, pressurized air in the air chamber forces water from the water chamber through a nozzle to the exterior of the housing until the flexible membrane expands to bear against the conical rearward deformation plate. The device is thus moved in a forward direction along with its attached swimmer or equipment.

18 Claims, 6 Drawing Sheets

